



**Guide to task 2a**  
**appraisal of a health impact assessment report**

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**A two-day course on  
*Principles and Practice of Health Impact Assessment  
in the Context of Water Resources Development***

**Guide to Task 2a**

**Appraisal of a Health Impact Assessment Report**

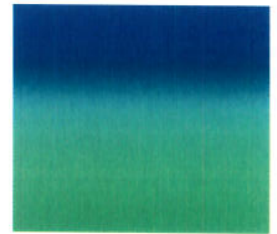
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## TASK GUIDE

for the **appraisal of the Health Impact Assessment report**  
of the Nam Theun 2 Hydropower Project in the Lao People's Democratic Republic

The purpose of this Task Guide is to assist your group in learning to work systematically and efficiently through the first part of an appraisal exercise which is a critical quality appraisal of the HIA report. This first part applies appraisal criteria that focus on method, procedure and conclusions.

The Task Guide breaks down appraisal into its essential, elementary steps. Completing each step supports the formulation of one or more paragraphs of text that eventually will make up the full appraisal report.

The use of this Task Guide follows the principles of problem-based learning. Each group selects a moderator and someone who takes notes. Following the table of contents and timetable, an overview provides initial information. On the first operative page (page 5) information is given and a number of questions are raised at the bottom of the page.

The group should discuss these questions, come to a group consensus on the responses and note down the responses **before** moving on to the next page.

Every next page is structured similarly:

- first, relevant feedback information on questions on the previous page is presented;
- a middle section contains new information for discussion; and,
- one or more questions are presented at the bottom of the page.

On completing the Task, the groups will each present their appraisal reports, including their conclusions.

Relevant background information is provided, and a resource person is available should a group feel it needs additional information to arrive at a consensus on a particular question.

Time management is critical to finish the task within the allotted time. On every page of the Task Guide a box indicates how far you have advanced in your task, to assist you with time management.

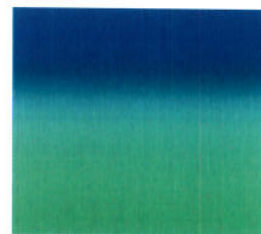
On completion of this task, you will have enhanced your knowledge about the concept of appraisal in the HIA context, about the correct criteria to apply and the nature and sequence of steps to take in the appraisal of the HIA process and about a synthesis of the appraisal of how conclusions were arrived at.



## Table of contents

|  |    |
|--|----|
| Timetable  | 4  |
| Task overview  | 5  |
| Introduction   | 6  |
| Terms of Reference                                   | 7  |
| Report objectivity                                   | 8  |
| Conflict of interest                                 | 9  |
| Timing   | 10 |
| Budgeting  | 12 |
| Consultant's profile                                 | 13 |
| Access to information                                | 14 |
| Procedural rigour                                    | 15 |
| Identification of health hazard and health promoters | 16 |
| Vulnerable communities                               | 17 |
| Biological and social health determinants            | 18 |
| Environmental determinants of health                 | 19 |
| Institutional health determinants                    | 20 |
| The overall health risk assessment                   | 21 |
| Conclusions  | 22 |
| Justification and evidence base                      | 23 |
| Outcome of the first part of the appraisal           | 24 |





### **Timetable**

A total of 4 hours is available for this Task, following the introductory presentations and briefing.

- 10:00-10:15 Introduction of Task work
- 10:15-10:30 Break/refreshments
- 10:30-12:30 Group work on first half of the appraisal task
- 12:30-13:30 Lunch
- 13:30-14:00 Plenary Q&A
- 14:00-15:30 Group work on second half of the appraisal task
- 15:30-15:45 Break/refreshments
- 15:45-16:15 Finish group work and prepare presentation
- 16:15-17:15 Groups report back to the plenary on their findings

### **Resource material**

#### *Hard copies:*

Birley, M.H., M. Gomes and A. Davy (1997). Health aspects of environmental assessment. Environmental Assessment Sourcebook Update (# 18, July 1997), Environment Department, World Bank, Washington DC

Peralta, G.L & Hunt, J.M. 2003. A Primer on health impacts of development programmes. Asian Development Bank.

Quigley, R., L. den Broeder, P. Furu, A. Bond, B. Cave and R. Bos. 2006. *Health Impact Assessment International Best Practice Principles. Special Publication Series No. 5*. Fargo, USA: International Association for Impact Assessment.

#### *On CD ROM:*

Birley, M.H. (1995). The Health Impact Assessment of Development Projects. HMSO, UK.

The draft HIA report for the Nam Theun 2 dam

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### *Aim of the Task*

The outcome of the appraisal will be one of the following decisions:

- Your decision should be accompanied by an adequate justification.

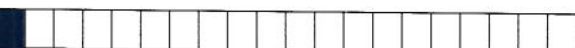
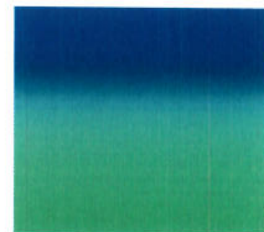
The output of this Task will be an appraisal report. The task focuses on the appraisal of the assessment procedure and the conclusions drawn in the draft HIA report of the Nam Theun 2 dam.

Each step in this Task ends with the requirement to write one or more short paragraphs for the appraisal report. In this way the report is written as the group goes along.

What is meant by an appraisal?

What is the purpose of appraising a Health Impact Assessment report?

- 5 -



5% completed

## Introduction

Appraisal is the quality assurance component of the HIA and its deliverables. An appraisal is carried out against a set of agreed criteria. Its objective is to establish and maintain independent quality standards. The starting point of the appraisal of an HIA report must be the Terms of Reference (TOR) that were given to the consultant(s). TOR may be found in an annex to the reports of the HIA, EIA and/or feasibility study.

Your instructions for the present task are to carry out the sequence of activities listed below for the appraisal of the draft health impact assessment report of the Nam Theun 2 dam in Lao PDR.

1. Decide whether the assessment conforms to the original TOR and whether these were adequate.
2. Verify the objectivity of the assessment and identify any important biases or unforeseen obstacles.
3. Decide whether the assessment procedure allowed for the data and their interpretation to be sufficiently comprehensive and credible to support the conclusions.
4. Decide whether the conclusions follow logically from the data collected, and whether they are accurate, comprehensive and probable.
5. Write the section of the appraisal report dealing with the assessment procedure and conclusions.

With the members of your group, you will need to consider and agree on criteria for your appraisal as you come to each step in turn.

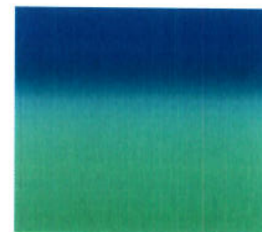
Have a look at the draft HIA report and leaf through it, familiarizing yourself with its structure and contents.

Discuss and decide which parts are relevant to the appraisal you are performing.

If you can find one or more sets of TOR, read them carefully.

List any items in the TOR that specifically refer to or are relevant to health. Also list any health issues you may spot while leafing through the report, that were not mentioned in the TOR. Save the list for future reference. Then turn to the next page.





10% completed

## Terms of Reference

You have familiarized yourselves with the draft HIA report and with the Terms of Reference (TOR).

The note of the IAIA Health Section/WHO (Quigley et al. 2006) explains why it is crucially important to follow a distinct HIA process in the context of a broader impact assessment approach, also at the appraisal stage. Read this note carefully and discuss in your group what it says about appraisal.

In relation to the questions below, you need to identify appropriate criteria for judging the adequacy of the TOR.

For example, in terms of scope the TOR may be too general (just a reference to "health" in a checklist) or too restrictive (limited to a small number of specific health hazards or even a single disease).

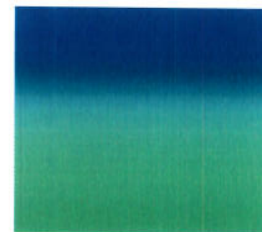
### Questions

In your judgement, were the TOR adequate for the performance of a meaningful HIA?

Which health items in the TOR are addressed in the HIA report and which items are not?

Record your answers for your appraisal report. Then turn to the next page.





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### Report objectivity

A good impact assessment report should be objective. Even with adequate Terms of Reference as the starting point for an HIA, objectivity can be compromised by:

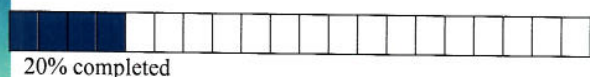
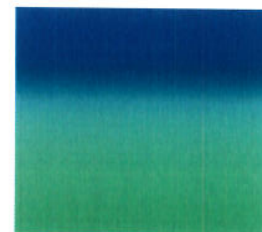
- Consultant's conflict of interest.
- Inappropriate timing and duration.
- Inadequate budgeting.
- Consultant's lack of expertise, experience or skills.
- Lack of access to information.

Review and analysis of the HIA report for each of these potential problems will help you to make a reasoned judgement of the objectivity of the HIA report that can be entered into your appraisal. The above five issues will be addressed one by one on the following pages.

#### *Question*

How could the above problems affect the objectivity of an HIA report?

Document your answers and use them to compare your ideas and expectations with your judgement, at the end of each of the coming six pages, of how these potential problems may have influenced the HIA report. Then turn to the next page.

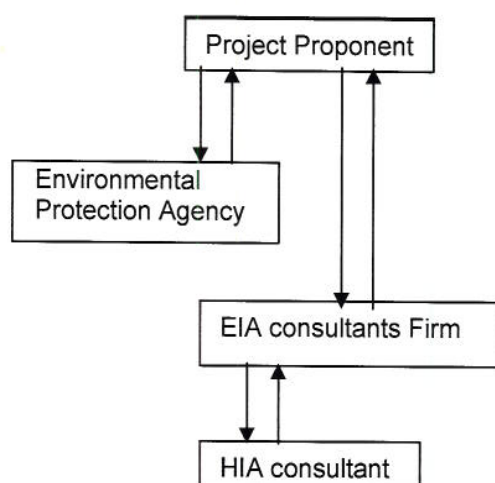


## Conflict of interest

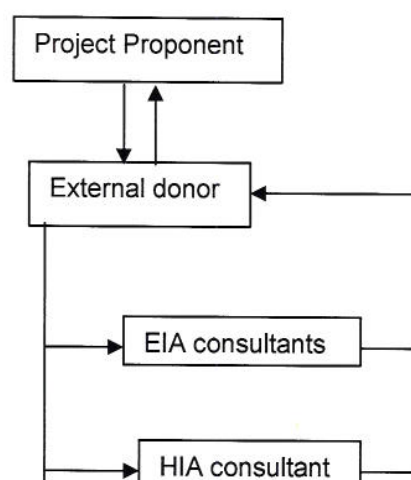
Consultants depend on their clients and may not want to be too critical of their clients' projects. The issue of client relationship is most sensitive when the consultant is paid by the project proponent. It is less prominent when the consultant is paid by the funding agency and the assessment is included into the project by order of the funding agency.

Examples

(1)



(2)

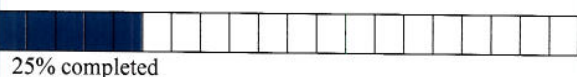
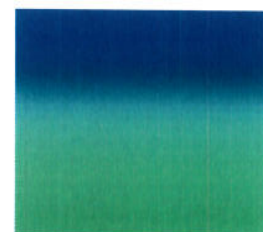


### Question

In the Nam Theun 2 project, which agency was the client of the consultants for the HIA?

If you can, construct a diagram to indicate the relationships between interested parties. Consider who are the members of the Nam Theun 2 Consortium.

Write a paragraph for the appraisal report with your judgement of the level of independence of the consultants' assessment. Add the diagram. Then turn to the next page.



## Timing (1)

If an HIA is requested after the first concrete has been poured, the assessment will be limited to questions related to the operational phase of a project. As a consequence, its outcome will focus on remedial rather than preventive health measures.

In a more optimistic scenario, if the assessment is initiated during the general planning surveys or feasibility studies of a project, then there is an opportunity to determine the most cost-effective way to reach both the economic and the health objectives during the entire project cycle.

The timing of an HIA in relation to other planning and design activities in the project cycle crucially determines its value. Often this is out of the consultant's control. Inappropriate timing may easily render the entire study useless.

### Questions

When was the HIA for the Nam Theun 2 dam carried out in relation to the rest of the planning process?

Were there opportunities for the consultant to interact with the designers in the early stages of planning?

How much time do you estimate the consultant spent on the project site, and how much interaction could the consultant realistically have had with planners, designers, other consultants and the community?

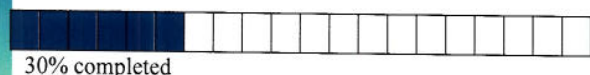
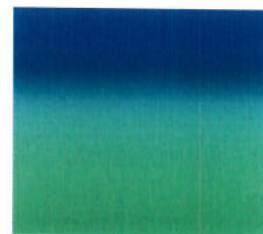
Planning calendar for the project

| Years                                | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Surveys                              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Feasibility study                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Project preparation and final design |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Construction                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| EIA                                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| HIA                                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

Fill in the chart, indicating with bars when the stated activities including the HIA were probably undertaken.

Discuss these questions. Write a paragraph for the appraisal report. Indicate any reservations in your group about the HIA due to problems with the appropriateness of its timing and /or with the time available for interactions with the designers and/or the community. Then turn to the next page.





## Timing (2)

In many instances, timing in relation to cyclical events is another essential determinant of the value of an assessment. For example, the seasonality of disease transmission needs to be considered when planning the direct collection of field data.

In the context of Nam Theun 2 think of the seasonality of malaria transmission in relation to the rainy/dry seasons, outbreaks of diarrhoeal diseases in times when safe drinking water is scarce. But also consider non-communicable health issues for example in relation to the agricultural production cycle.

### *Questions*

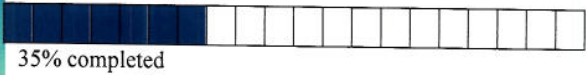
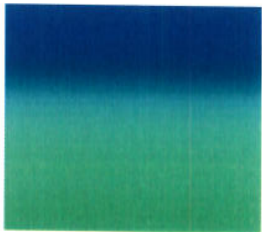
Do the TOR refer to and allow for adequate coverage to health issues with seasonal variations?

Are there indications that the consultant(s) took account of seasonal variations in their data collection?

Does the HIA report cover health determinants that may vary over the seasons?

Write a paragraph for the appraisal report. Indicate any reservations about the HIA due to the lack of attention for seasonal variations in health determinants. Then turn to the next page.





**Budgeting**

Next, consider whether sufficient money was spent on the HIA for the Nam Theun 2 project. Poor budgeting can have important repercussions for the objectivity of the HIA report. The cost of an HIA ought to be a reasonable percentage of the total planning cost of the project. This is illustrated by the example below:

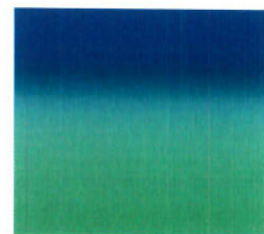
Construction and planning costs of the Jubba River dam, Somalia

|  |                 |          |
|--|-----------------|----------|
| Construction of concrete dam, irrigation and flood control | US\$100,000,000 | of which |
| feasibility and final design                               | US\$15,000,000  | of which |
| socioeconomic, environment and health impact assessment    | US\$3,500,000   | of which |
| health and water quality impact assessment                 | US\$200,000     |          |

|  |                        |
|--|------------------------|
| <b>Questions</b>   | US\$ or local currency |
| What are the expected construction costs of the project whose HIA you are appraising?                  | .....                  |
| What was the cost of the feasibility study and final design?   | .....                  |
| What was the cost of the HIA?<br>(Base your estimate on the number of staff, time, salaries, expenses) | .....                  |
| What was the cost of the HIA as a percentage of the total planning cost?                               | .....                  |
| Considering its relative cost, was the HIA adequately funded?  |                        |

Hint: some of the information requested may be available on the project’s web site [www.namtheun2.com](http://www.namtheun2.com).

Write a paragraph for the appraisal report on the adequacy of the budget for the HIA. Then proceed to the next page.



40% completed

### Consultant profile

Background and experience of the consultant(s) may lead to inherent biases in the assessment. Usually, these are either an over-emphasis of certain health issues at the expense of others, or a disproportionate focus on certain types of interventions.

Screening will have revealed key health issues related to a proposed project. This will have guided the development of the consultant profile. It may also have misguided the profiling. Using existing networks to identify (a) suitable candidate(s) can lead to making compromises with respect to the profile of the one finally selected. There may have been other constraints (time, financial resources) explaining why the consultant(s) with the ideal profile was not selected.

#### *Questions:*

Was a detailed consultant profile developed as part of the Terms of Reference? If so, did the consultants who carried out the HIA match that profile?

Is the HIA consultant a broad public health specialist or rather a narrow disease expert, and how may this have come to expression in the HIA Report?

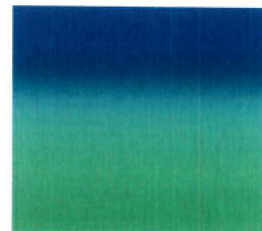
What is the institutional affiliation of the consultant and how may this have influenced the HIA Report?

Did the consultant have HIA experience, and had he/she worked before in the project area?

Is the consultant linked to an international network of impact assessment professionals?

Is the consultant linked to national health professionals?

Discuss these questions, write one or two paragraphs about the possible biases introduced by the profile of the consultant(s), then turn to the next page.



45% completed

### Access to information

How can you be sure that the information in the HIA report is sufficiently comprehensive and credible? There may be many obstacles to obtaining information. Informants from different ministries may have been reluctant to share reports and data with the consultant. There may have been prejudices, for instance associated with gender or race. Communication may have been hampered by language barriers. Local communities may have provided the consultant with information reflecting their expectations rather than reality.

The issue of reliability of data will be addressed in the next section on procedural rigour.

In the HIA report itself, you may find direct or indirect indications of lack of access to information. You may also know from your own experience of sources of information that have been missed.

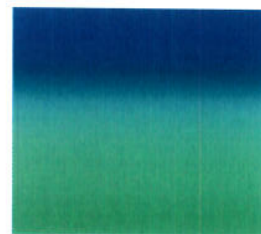
### Questions

Does the HIA report indicate that

- existing reports from relevant ministries or other authorities were obtained and cited?
- Information was cross-checked?
- Local consultants were employed?
- A wide range of key informants were interviewed?
- All sections of the community were consulted and considered?

Write a paragraph in your report about the comprehensiveness and credibility of the information obtained, before going to the next page.





50% completed

### Procedural rigour

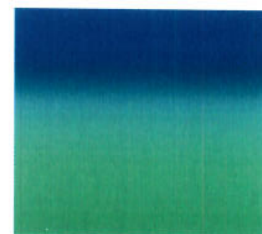
Whatever health impact assessment method the consultant used, it must have sufficient breadth and depth. In one form or another, it needs to include information on the components considered in Task 1:

- (i) Health hazards and promoters.
- (ii) Vulnerable communities.
- (iii) Individual, community and social determinants of health (risk factors and opportunities).
- (iv) Environmental health determinants (risk factors and opportunities).
- (v) Institutional health determinants (risk factors and opportunities).
- (vi) The overall health risk analysis, with conclusions.
- (vii) Recommended measures for health risk management and health promotion.

Points (i) to (vi) are individually covered in the following pages. Appraisal of the technical adequacy, social acceptability and economic feasibility of the recommended measures is not part of this Task.

Examine the structure of the HIA report to ensure all essential components have been covered and note down the observations of the group members. Then turn to the next page for a detailed appraisal of the first component.





55% completed

### Identification of health hazards and health promoters

The health hazards associated with a development project can be grouped conveniently as follows:

- Agents of communicable diseases.
- Agents/causes of non-communicable diseases.
- Causes of malnutrition.
- Causes of injury.
- Causes of psychosocial disorders.

Health promoters should also be addressed, as a separate category. They have a potential to enhance well-being. They can be agents (e.g. anti-oxidants) or actions (e.g. including bicycle lanes as part of a road development plan).

It is likely that examples from each of these categories can be identified for any development project.

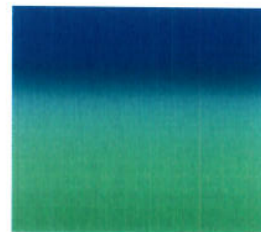
### Questions

What health hazards and health promoters are identified in the HIA report?

Consider the data used to support the identification of the most important health hazards. Are they recent? Are they reliable?

In your judgement, do you consider that the consultant identified all the important health hazards and promoters that could be associated with the project?

Write a paragraph for the appraisal report on the adequacy of health hazard and health promoter identification. Then turn to the next page.



## Vulnerable communities

Vulnerable communities include any community group that may be adversely affected by the project.

Development may change the size, composition and social fabric of communities through changed birth and death rates, displacement, resettlement and/or migration. The change in composition may be reflected in the gender balance, age composition and/or ethnicity. Also, social structures may change, traditions and beliefs may be affected and inter-generational relations may break down.

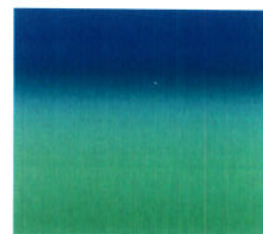
### *Questions*

Did the HIA report identify all the vulnerable communities?

Were current size and composition of these communities determined and was impact of the project on these characteristics estimated?

Was a Social Impact Assessment carried out and has its outcome been taken into account in the HIA?

Write a paragraph for the appraisal report as to whether the issue of vulnerable communities was adequately handled. Then proceed to the next page.



### Biological and social determinants of health

Some community groups are more vulnerable to specific health hazards because of their initial health or immune status, or because of their occupation, poverty, educational status, age build-up or gender balance.

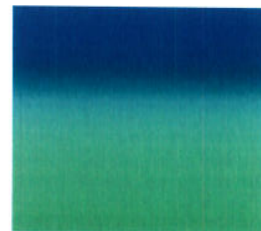
#### *Questions*

Does the report identify how different community groups would be affected by the project?

Does the report identify the health determinants affecting each vulnerable community group?

Write a paragraph for the appraisal report on the adequacy of discussing the biological and social health determinants. Then move on to the next page.





70% completed

## Environmental determinants of health

The project may create new hazardous environments or modify existing ones.

Examples may include faulty chemical storage facilities, contaminated drinking water, new habitats promoting disease vectors, industrial sites as sources of pollution, unguarded machinery, contaminated food supplies, or poor siting of human settlements.

The associated environmental determinants of health may vary geographically and temporally. You will find more examples in the resource materials listed at the beginning of the Task.

### *Geographical changes*

The effect of physical changes can extend over considerable distances away from the project, especially downstream or downwind. The construction of a dam, for example, may affect the flood patterns downstream, with repercussions for agricultural production and nutritional status.

### *Temporal changes*

Exposure to health hazards can vary seasonally and over a longer time scale.

Many vector-borne diseases, such as malaria, constitute a seasonal health risk with transmission associated with certain climatic conditions (see also Task 2, page 11).

### *Questions*

Does the report describe the geographical distribution of health determinants? In this connection, does it discuss downstream effects?

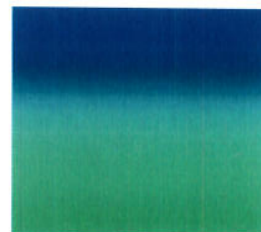
Does it identify potential zones of transmission or exposure?

Does the report give details of the seasonal distribution of health determinants?

Does the report distinguish the environmental determinants of health in construction, early operation (first five years), late operation (5-20 years) and decommissioning?

Write a paragraph for the appraisal report commenting on the way predictions were made regarding exposure to environmental risk factors. Take into account geographical and temporal variations. Then proceed to the next page.





75% completed

### **Institutional health determinants**

Many different institutions have a responsibility for health. In the specific context of your project, a number of government and non-governmental institutions are concerned with health. Their capacity, capability and jurisdiction are variable.

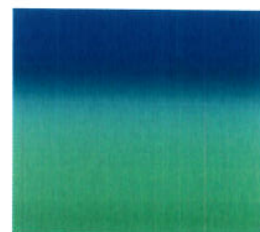
#### ***Questions***

Does the report identify all the relevant institutions?

Does it identify their strengths and weaknesses?

Does the report identify needs for extra health services that could arise from the project?

Write a paragraph for the appraisal report covering the adequacy of analyzing and describing existing services. Then turn to the next page.



80% completed

### **The overall health impact assessment**

The one-but-last-step in the health impact assessment procedure is a synthesis of the findings for each health hazard and promoter and their related determinants into a health outcome.

These findings need to be weighted for their relative importance. Some determinants related to an individual hazard may re-enforce one another (for example, resettlement of non-immune people into an area where irrigation development has boosted malaria vector populations), others may cancel each other out (the risk of injury due to the introduction of agricultural machinery will be reduced if there is sufficient capacity within the agricultural extension services to launch an effective training programme).

A correct synthesis will depend on the capacity of the consultant to weight the various determinants attributed to each hazard and promoter and to consider the ways in which the associated risks and opportunities may interact in an integrated picture.

#### ***Questions***

Does the report provide sound arguments to support the synthesis of health determinants for each hazard or promoter?

Is the report transparent about the weighting and integration of determinants for each hazard or promoter?

And, does the overall health impact assessment provide a solid basis for accurate conclusions concerning the health outcome of the project?

Was the final synthesis of health risk factors and opportunities done in an adequate way?

Write about your findings in one or more paragraphs. Next, examine the conclusions of the HIA report. Consider and list the criteria that can be applied to appraise whether the results of overall health risk analyses have been translated adequately in to health impact conclusions. Then proceed to the next page.



85% completed

## Conclusions

The HIA report should acknowledge that the project will affect different community groups in different ways. It should present changes in health risks and opportunities for each community group whose health status will be significantly affected by the proposed project.

The report should also acknowledge that risks and opportunities will vary for each community group during the different project phases.

The final conclusions should sum up the risks and opportunities and rank them for each project phase.

### *Examples*

During the construction phase of an agricultural development project the construction workforce and the camp followers will be especially exposed to sexually transmitted infections (STIs). It is expected that during the operational phase this community group will have dispersed and will have been replaced by a community of intended project beneficiaries. The stable family structure of this farming community will result in a reduced exposure to STIs. They may, however, be especially exposed to agricultural pesticide poisoning.

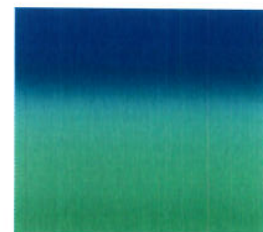
In large projects, temporary health facilities may be constructed for expatriate workers. The availability of these facilities will counterbalance certain health risks identified to affect the project beneficiaries during the operational phase, provided they can be kept operational by the local authorities.

### *Question*

To what extent have the conclusions been correctly justified and are they based on solid evidence?

Discuss this question and formulate your observations for your report. Then move to the next page.





90% completed

### Justification and evidence base

In the earlier part of the appraisal you are performing, you considered whether the assessment of biological and social health determinants, environmental health determinants and institutional health determinants was sufficiently justified.

To complete your appraisal, you need to make sure that the process of drawing up final conclusions is equally justified and based on solid evidence. Even if the procedure up to this point has been flawless, this final step may still allow bias, prejudice or convention to creep in.

Sound statistics, reference to experience in previous projects (with a clear indication of the similarities and the differences) and a list of assumptions made will permit you to appraise this part of the procedure. This is the moment to test how variations in the assumptions affect the final conclusions. If variations in the assumptions do not significantly alter the conclusions, then they can be considered robust.

### Questions

Does the report clearly list the assumptions made in reaching its conclusions?

Are the assumptions reasonable and to what extent will changes in the assumptions affect the conclusions?

Now, write a paragraph on the robustness of the conclusions. Then proceed to the final page.





95% completed

### Outcome of the first part of the appraisal

Go back to the list you made at the beginning of this Task (page 6) and look at the items you originally thought most important for the TOR.

How does your original list look now, after completion of this Task?

You may now summarize your findings concerning the assessment procedure and conclusions in a final paragraph in the appraisal report. Don't forget to justify the outcome of your appraisal.

Also, prepare a summary progress report with preliminary recommendation concerning the rejection, the need for improvement or the acceptance of the HIA based on the appraisal of procedure and conclusions. Should you have encountered major flaws that warrant rejection or the need for a major improvement of the HIA, then there would obviously be little point in appraising the consultant's recommendations.

Prepare a brief presentation summarizing your appraisal report, of not more than ten minutes

This concludes Task 2.

100% completed